REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

The specification has been amended on pages 2-3.

Claims 4 and 7 have been canceled.

New claim 10 has been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-3, 5, 6, and 8-10 are now pending in this application.

Objections to the Specification

The abstract is objected to for containing informalities. The abstract has been amended to overcome this objection. An amended abstract is attached to this response as a new abstract on a separate sheet. Withdrawal of this objection is respectfully requested.

The specification is also objected to for containing informalities. The specification has been amended to overcome this objection. Withdrawal of this objection is respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,176,705 (hereafter "Russell et al.") in view of U.S. Patent No. 4,408,444 (hereafter "Baillievier"). This rejection is respectfully traversed.

Amended claim 1 recites an elongation cord adapted for the reinforcement of elastomer structures, said cord comprising: a core, said core being a polymer core, and three to nine strands twisted around said core with a cord twisting step in a cord twisting direction, wherein: at least one of said strands comprises a first group of filaments and a second group of filaments, said first group of filaments being twisted with a first twisting step in a first twisting direction, said second group of filaments being twisted with a second twisting step in a second twisting direction, said first twisting step being different from said second twisting step or said first twisting direction being different from said second twisting direction, or both, said first twisting direction being equal to said cord twisting direction, and said first twisting step being equal to said cord twisting step, wherein said cord has an elongation at break of at least 5%. Claims 2-6, 8, and 9 depend from amended claim 1.

By providing a cord, as recited in amended claim 1, with a high elongation before break, a cord can be provided with improved absorption of impacts caused by the unevenness and roughness of a road. Such a cord would have high corrosion resistance, a high elongation at low load, and would be cheap in manufacture. Furthermore, a cord having high elongation at low load is capable of accommodating tire expansion when a new tire is being inflated.

Russell et al. discloses a steel tire cord 5 that includes steel strands 7-12 that are spirally wrapped around a multifilament core 6 of aramid. See Russell et al. at col. 1, lines 53-55, 60-62. However, as noted by the Office on page 3 of the Office Action, Russell et al. does not disclose or suggest that "at least one of said strands comprises a first group of filaments and a second group of filaments." Russell et al. merely discloses that the steel strands 7-12 include steel filaments or wires 13-16 that are twisted together. See Russell et al. at col. 1, lines 62-64.

Furthermore, Russell et al. does not disclose or suggest that "said first group of filaments being twisted with a first twisting step in a first twisting direction, said second group of filaments being twisted with a second twisting step in a second twisting direction, said first twisting step being different from said second twisting step or said first twisting direction being different from said second twisting direction, or both, said first twisting direction being equal to said cord twisting direction, and said first twisting step being equal to

said cord twisting step." Russell et al. does not disclose or suggest that the twisting step and/or direction of a first group of filaments is different than that of a second group of filaments, with the twisting direction of the first group being the same as the twisting direction of the cord and the twisting step of the first group being equal to the cord twisting step.

Nor does Russell et al. disclose or suggest such a cord, "wherein said cord has an elongation at break of at least 5%." Russell et al. does not disclose or suggest the elongation for the disclosed cord. Furthermore, Russell et al. discloses that the core 6 has a high tensile strength that is substantially equal to, or closely approximate to, the tensile strength of the steel strands 7-12. See Russell et al. at col. 2, lines 1-4. One of ordinary skill in the art would understand that materials with high tensile strength generally have low elongation values because of the general trade-off between strength and ductility. Therefore, one of ordinary skill in the art would understand that Russell et al. is teaching against a cord with a high elongation, as claimed in amended claim 1.

Baillievier discloses a cable that includes wires 1 twisted in a first direction and wires 13 twisted in a second direction. See Baillievier at col. 2, lines 35-45; col. 3, lines 1-5. Wires 1 can be twisted in the opposite or the same directions as wires 13. See Baillievier at col. 4, lines 18-20. The wires of a first group, containing two wires 31, have no twist around each other or have a relatively large twisting pitch. See Baillievier at col. 3, lines 27-36; col. 4, lines 13-15. The wires of a second group, containing two wires 32, are twisted around each other with a twist pitch p, which is the twist pitch p of the cable. See Baillievier at col. 3, lines 27-38.

However, the cable disclosed by Baillievier does not include a core and thus the wires disclosed by Baillievier are not twisted about a core. Although Baillievier discloses that the wires 32 can be twisted about each other with the same pitch p as the cable, Baillievier does not disclose that the cable disclosed by Baillievier includes a core. Therefore, Baillievier does not disclose that the two groups or strands of wires 31, 32 are twisted about a core so that wires 32 have the same pitch as the cord.

Furthermore, Baillievier does not disclose or suggest a cord, "wherein said cord has an elongation at break of at least 5%." Baillievier does not disclose or suggest the elongation for the disclosed cable.

It would not have been obvious to one of ordinary skill to combine the teachings of Russell et al. and Baillievier to provide the features of the cord of amended claim 1. A basic requirement of a *prima facie* case of obviousness is that a prior art reference, or prior art references when combined, must teach or suggest all of the claim limitations. See M.P.E.P. §§ 2143, 2143.03. The Office has not set forth a *prima facie* case of obviousness because Russell et al. and Baillievier, alone or in combination, do not disclose or suggest all of the features of the cord of amended claim 1. Furthermore, a *prima facie* case of obviousness cannot be made on the basis of Russell et al. and Baillievier because these references fail to disclose or suggest all of the features of amended claim 1.

For at least the reasons discussed above, withdrawal of this rejection is respectfully requested.

New Claim

New claim 10 has been added. Claim 10 depends from claim 1. Applicant respectfully submits that claim 10 is allowable over the prior art for at least the reasons discussed above in regard to independent claim 1, from which claim 10 depends. Furthermore, Applicant respectfully submits that claim 10 recites features not disclosed or suggested by the prior art because it would not have been obvious to combine the teachings of Russell et al. and Baillievier to provide the features of claim 10. Russell et al. teaches away from the use of polyester for the core because Russell et al. teaches that a polyester core reduces the strength of the cord reinforcement because the cord is not capable of carrying loads that steel strands are capable of bearing. See Russell et al. at col. 1, lines 29-35; col. 2, lines 37-39. Baillievier does not disclose or suggest a core. Therefore, it would not have been obvious to combine the teachings of Russell et al. and Baillievier to provide the cord of claim 10.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date JUN 12 2007

By 

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5426
Facsimile: (202) 672-5399

Glenn Law
Attorney for Applicant
Registration No. 34,371